Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

A new genus of fossil Liliaceae

T. D. A. COCKERELL

(WITH ONE TEXT FIGURE)

In 1873[*] Lesquereux reported a singular fossil from the Miocene shales of Florissant, Colorado, as *Ophioglossum Alleni*. In 1878 he figured it[†] and assigned it to the genus *Salvinia*, on account of its close resemblance to Heer's European fossil *S. reticulata*. Hollick[‡] gave a new figure, and placed the plant in the genus *Tmesipteris*, where it remains in Knowlton's Catalogue.

This so-called *Tmesipteris Alleni* is common in the Florissant shales but has remained an unsolved problem. A number of years ago, at the British Museum, I showed specimens to Dr. A. C. Seward and Dr. A. G. Nathorst. We could all agree that there was no relationship with *Tmesipteris*, but it was impossible to even guess at the true position of the species. Seward,[§] when publishing on the subject later, rejected the reference to *Tmesipteris*, without being able to suggest another alternative. In 1913,[¶] to avoid perpetuating an obvious error, I referred the plant to *Carpolithes*, supposing it to represent some sort of fruiting body. No seeds could ever be seen, although the appearance suggested a flattened pod; but the published figures failed to show a thickening on the midrib, a little beyond the middle. In a very good specimen found at Florissant in November, 1921, there is a definite body at this point, with a diameter of nearly 3 mm. It looks like a small berry, with the contents extruded (FIG. 1, C).

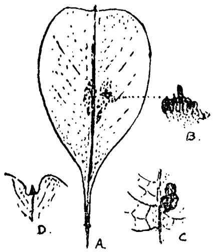

FIG. 1. BRACHYRUSCUS ALLENI Cockerell

A. Cladode bearing pistillate flower. B. flower, enlarged. C. Fruit on a mature cladode. D. Emarginate apex of a mature cladode.

Probably the riddle would never have been solved but for the discovery of a younger specimen in the Florissant shales, at Station 14. This (FIG. 1, A, B) shows that we have to do neither with a leaf, frond nor pod, but with a cladode. Attached to the midrib is an indistinct mass, presumably a thin bract, upon which can be seen a dark object (FIG. 1, B), which seems to agree very closely with the flower of *Ruscus*. The pistil is erect and distinct. The plant is dioecious, and the staminate flower is as yet unknown. At first I thought there might be two flowers, but the supposed second one is, I believe, part of the midrib.

---

[*] For bibliographical references see Knowlton, Mesozoic and Cenozoic plants of North America. U. S. Geological Survey Bull. 696: 626. 1909

[†] Tertiary Flora, *pl. 5*, *f. 11*. 1878.

[‡] Bull. Torrey Club. **21**: *pl. 205*, *f. 12*. 1894.

[§] Fossil plants **2**: 25. 1910.

[¶] Am. Jour. Sci. VI. **36**: 500.

As I could not identify the plant with *Ruscus*, I consulted Dr. Britton, who very kindly sent me material of *Phyllonoma ruscifolia* Willd. and *Ruscus hypoglossum* L. It was at once apparent that the fossil had nothing to do with *Phyllonoma*, but returning to *Ruscus* as the only alternative, I was able to recognize close morphological similarity. The genus *Ruscus* is today limited to a few Palaearctic species, with lanceolate to ovate sharply pointed cladodes. The apical points are stiff and sharp, as any one who has handled butcher's broom will testify. At first sight the venation seems quite different from that of the fossil, but if we imagine the *Ruscus* cladode broadened and abbreviated until the principal veins are nearly or quite transverse instead of longitudinal, the correspondence is exact. The published figures of the fossil do not show that there are principal veins, just as in *Ruscus*.

The morphological correspondence is so exact that it becomes a question whether the fossil can be referred to *Ruscus*. However, considering the broad form of the cladodes, with truncate or emarginate, mucronate apex, the essentially transverse veins, and the remoteness in time and space, it appears justifiable to establish a distinct genus, *Brachyruscus*, the species becoming *Brachyruscus Alleni* sp. nov.* Whether Heer's *Salvinia ret-*

---

* Dr. Hollick writes that he is not convinced that the flowering cladode, which I have figured and described, belongs to the same plant as the "*Tmesipteris*" *Alleni*. I had considered the possibility of there being two different things, and am personally entirely convinced that all the specimens belong to a single species. However, I will designate the flowering specimen as the type of the genus and of a species which I will name *B. Alleni*. This name will remain valid if my view is correct, only *B. Alleni* Cockerell will be a synonym of *B. Alleni* (Lesq.) Cockerell. If it should be decided that there are two quite different plants, *B. Alleni* Cockerell will still stand, only to fall in case some author considers that two distinct species of *Brachyruscus* are present.

iculata is congeneric, it is impossible to say; the reticulation, as figured, looks different.

Ruscus today has its western limit in Madeira. The insular form, which I saw in cultivation in Funchal, is regarded as a race of *R. hypophyllum* L., but is perhaps specifically distinct. The name *R. latifolius* Lowe is preoccupied by Rafinesque.

BRACHYRUSCUS gen. nov.

Cladodes pyriform to suboval in outline, with a strong midrib; apex obtuse, emarginate, with a stiff mucro representing the end of the midrib or morphological apex; principal veins diverging from the midrib approximately at right angles, except toward the apex, where they form angles of about 45 degrees; principal veins connected by veinlets, forming a coarse reticulation of quadrilateral or kite-shaped areas; inflorescence borne on midrib as in *Ruscus*, with apparently a single flower, which (as imperfectly preserved) presents no characters to differentiate it from *Ruscus*. Type the following:

Brachyruscus Alleni sp. nov.

Cladode in the type specimen broad-pyriform, with tapering base, length about 18 mm. and breadth 12 mm. [in my opinion the larger cladodes (length about 31 mm. and breadth 20 mm.), with dark and distinct venation, belong to the same species]: stems unknown but doubtless woody.